

REMARKS/ARGUMENTS

No claims are hereby amended. Claims 1, 3, 6, 7, 9-12 and 14-24 are pending and unchanged. Claims 2, 4, 5, 8 and 13 were previously canceled. No new matter is added. The Applicant thanks the Examiner for the indication that claim 22 contains allowable subject matter.

Claims 1, 3, 6, 7, 9-12, 14-17 and 19-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cobb et al. (US 5,054,954).

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cobb et al. in view of Anderson (US 2003/0086761).

Claim 1 defines a lightweight, portable roadway barrier, wherein the weight of the barrier is less than 200 kg per meter of length of the barrier, wherein the barrier is a stand alone barrier in that it does not require additional mass to function as a barrier, and wherein the barrier comprises (a) a structural framework and (b) panels mounted to opposite sides of the barrier. The claim defines that the purpose of the structural framework is to resist collapse of the barrier in response to impact of a vehicle. The purpose of the panels is to deflect a vehicle on impact with the barrier. The claim requires that the structural framework comprises an assembly of (i) upright members at opposite ends of the barrier, (ii) at least one upright member between the end members, and (iii) at least one longitudinal member extending along the length of the barrier and connected to each of the upright members. The claim further requires that the internal structural framework provides sufficient rigidity for resisting collapse of the barrier in response to vehicle impact, that the principal function of the side panels is to deflect a vehicle on impact of the vehicle against the barrier, and that the side panels do not make a substantial contribution to the rigidity of the barrier. The structural framework of claim 1 is a combination of upright members and longitudinal members that are connected together.

In contrast, Cobb et al. discloses a barrier 12 which has upright steel panels 14, bulkhead panels 36 at spaced intervals along the length of the barrier 12 and lid panels 48. The upright steel panels 14 and the bulkhead panels 36 define filler cavities 22. Cobb et al. does not teach or suggest, among other things, that the structural framework provides sufficient rigidity for resisting collapse of the barrier in response to vehicle impact, or that no additional mass is required to function as a barrier, as claimed in claims 1 and 24.

Rather, Cobb et al. discloses that the barrier includes a "filler material". This is not required for the present invention and is a key difference between the present invention and commercially-available barriers, such as the barrier of Cobb et al. The Examiner argues in the Office action that the filler material is "a preferred option but not essential to the invention" and discounts the relevance of the references to filler material on this basis (see page 3 of the Office action). The Applicant asserts that the filler material is in fact essential to the device of Cobb et al. The Cobb et al. patent is a long document and a significant part of the document focuses on the filler material. Specifically, Cobb et al. discloses that stabilized filler material deforms under impact to absorb the impact energy (see col. 5, lines 14-20). Also, Cobb et al. states that "[t]he compressive strength of the stabilized filler material must be limited to provide a sufficient degree of yield under impact to absorb an adequate amount of impact energy" (col. 4, lines 5-8). The stabilized filler material is necessary for the barrier 12 of Cobb to function. The steel panels 14, bulkhead panels 36 and lid panels 48 do not provide sufficient rigidity for resisting collapse of the barrier in response to vehicle impact. Rather, the stabilized filler material contained in the filler cavities provides the required rigidity. Further, the stabilized filler material and the mass associated therewith are required for the barrier 12 to function.

The primary focus of Cobb et al. is the use of stabilized filler material in place of nonstabilized filler material to increase beam strength and thereby reduce twisting of the barrier under impact (col. 1, line 47-col. 2, line 7). Cobb et al. goes to great length to describe the benefits of a stabilized filler material in place of a nonstabilized filler material (col. 10, line 55-col. 11, line 20, col. 13, line 33-col. 15, line 34).

Cobb et al. describes the desired properties of the stabilized filler material and how the stabilized filler material allows the barrier to properly function (col. 3, line 55-col. 5, line 36). Cobb et al. conducted a first test of a roadway barrier having nonstabilized filler material and a second test of a roadway barrier having stabilized filler material (col. 15, line 35-col. 16, line 52). These tests allowed Cobb et al. to conclude that "by selecting the appropriate filler material, and stabilizing the filler material to provide an appropriate minimum shear strength and an appropriate maximum compressive strength, the roadway barrier of this invention can be designed to accommodate conventional automobiles, a desired mix of automobiles and large trucks, or can be designed to be specific for a large volume of large trucks" (col. 16, lines 53-60).

The stabilized filler material provides an increased beam strength for the barrier to enable the barrier to function properly (col. 19, lines 1-15). Additionally, the stabilized filler material puts the rear panels of the barrier (those on the opposite side of the impact area) in tension during impact. The tension in the rear panels in combination with the stabilized filler material provide an increased beam strength in comparison with a barrier having unstabilized filler (col. 19, lines 50-57). Cobb et al. further states "the stabilized filler material contributes to the beam strength of the barrier. Applicants believe, therefore, that it may be possible to reduce the thickness of the material from which the panels are made and still have a barrier with equivalent performance" (col. 19, lines 57-62).

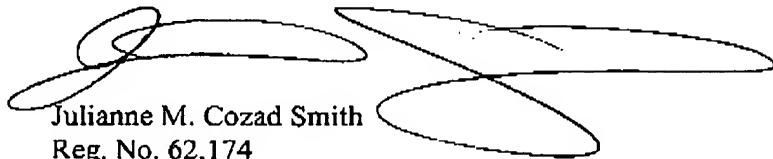
Not only does Cobb et al. fail to teach or suggest that the filler material is optional, but Cobb et al. actually discloses that the filler material is necessary to provide a suitable resistance to impact and deformation to attenuate vehicle speed upon impact (col. 10, line 55-col. 11, line 20). It is very clear to one of ordinary skill in the art that Cobb et al. relies on the filler material to provide a properly-functioning barrier. If the filler material were omitted from the barrier of Cobb et al., the modified barrier would fail to function as intended. Such a modification would render the device of Cobb et al. unsatisfactory for its intended purpose. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)" (M.P.E.P. §2143.01 (V)) There is no suggestion or motivation to make the modification to Cobb et al. proposed by the Examiner (e.g. omitting the filler material, see page 3 of the Office action).

Further, the bulkhead panels 36 do not resist collapse of the barrier in response to impact of a vehicle. Rather, "the bulkhead panels 36 have limited compression strength thereby permitting collapsing of the bulkhead panels 36 under impact thereby insuring that the panel connection means will not, after impact, present obstructions which tend to project beyond the impact deformed surfaces of the panels 14" (col. 12, lines 6-12). The bulkhead panels 36 are designed to collapse under impact so as to avoid presenting obstructions after impact. This is in direct contrast to claims 1 and 24 which require that the internal structural framework provides sufficient rigidity for resisting collapse of the barrier in response vehicle impact. The bulkhead panels 36 of Cobb et al. are designed to collapse under impact while the filler material is required to provide sufficient rigidity for resisting collapse of the barrier.

Anderson does not teach or suggest, nor does the Examiner allege that Anderson teaches or suggests each and every element of claims 1 and 24. Rather, Anderson is relied upon for the lifting ring.

Cobb et al. and Anderson, taken alone or in combination, do not teach or suggest each and every element of independent claims 1 and 24. Therefore, claims 1 and 24 are patentable over Cobb et al. and Anderson. Claims 3, 6, 7, 9-12 and 14-23 depend from claim 1 and are allowable for the same and other reasons not specifically mentioned herein. Reconsideration of the prior art rejections is respectfully requested.

Respectfully submitted,



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